Science Fair Project Planner

Name(s): _____

✓	Due Dates	Tasks
		Choose topic and write project question.
		Get approval from your teacher.
		Research your topic. Write science terms and paragraph.
		Write hypothesis.
		Design experiment; list variables and write procedure.
		List and gather materials.
		Conduct experiment multiple times. Record observations and data.
		Create a table, chart, or graph of the data.
		Draw conclusions. Explain how you would improve your experiment.
		Make the project display.
		Write and print abstract.
		Present project at science fair.

Project Question

Think of a Question

Your question will drive your entire project. Make sure that your question is something that can be measured and answered by following the scientific process. You may use the project question for your project title.

Brainstorm some possible questions that you are interested in learning more about.

Once you have decided on your project question, write it on the lines below and then get approval from your teacher to begin your project.

_____

_____

_____

Project Research

Research Your Topic

Spend some time learning more about your topic. Use reliable Internet sources, books from the library, your science book, or other resources. Not only do you want to be an expert on your topic, but you want to teach others about your topic.

Science Terms - locate at least 3 key science words related to your topic. Your science book is an excellent place to find these. Make sure that the words you choose are directly related to your topic. Provide a definition of each key word IN YOUR OWN WORDS.

Term	Definition

Project Research

A paragraph describing the science behind your project - after you have completed your research give us, your audience, some background information on your topic in a complete and well-written paragraph. Give us specific, rather than general information. Use the space provided to write a draft. You will edit a final copy to place on your display board.

Project Hypothesis

State Your Hypothesis

Based on your research, decide what you think the outcome of the project will be and make a good guess as to what you think the answer to your question will be. **Also explain WHY you think that will be the outcome.** Remember, it is ok if you don't have the right answer; that is how scientists make discoveries. Make sure that your hypothesis is written in a complete sentence.

Start by listing some possible outcomes or answers to your question.

Decide which outcome is most likely. This will be your hypothesis. Clearly write your hypothesis in complete sentences.

Project Experiment

Design Your Experiment

Clearly write out the procedure you are going to follow. Remember that your experiment needs to follow the scientific process and that you need to have one variable that you are going to change (independent variable). There are three variables in a scientific experiment: independent, dependent, and controlled.
The *independent variable* is the one, and only one, variable you will change.
The *dependent variables* are those being observed and measured throughout the experiment.
The *controlled variables* are those that remain constant and allows you, the scientist, to understand how the experiment would react under normal circumstances.

Independent Variable:

Dependent Variables:

Controlled Variables:

Project Experiment

Materials

List *all* materials needed to complete the experiment. Be specific about type, size, brand, etc.

Project Experiment

Procedure

Write out each step of your experiment. Remember to number each step and clearly explain what to do. Other scientists should be able to follow the same steps and get similar results.

Project Experiment

Conduct experiment

Scientists conduct an experiment many times in order to get the most accurate data, so make sure you also conduct your experiment multiple times. During your experiment you need to collect data and make observations. You will record these in your Experiment Log. After you have completed the experiment use your log to write down the data and observations below. In your log you will need to:

Collect Data - you will need to collect numerical data; that means you need to take measurements during the experiment. Measurements can be temperature, distance, height, etc. Creating a chart is a helpful way to organize your data. You will analyze the data later to determine the results of your experiment.

Make Observations - as you conduct your experiment you will use your senses (sight, smell, touch, etc.) and write down any observations you make during the process.

Observations

Project Experiment

Data

Project Results

Determine the Results

Now it is time to review your data and observations to find out what happened during the experiment. Think about the best way to show your data: bar graph, line graph, chart, etc. and then create a table or a graph below. This visual will help you analyze your data for trends.

Results

Use this space, or a separate sheet in your notebook, to sketch 1 or more tables, charts, or graphs to analyze your data.

Project Results

Determine the Results

You will also write out the results of each test in the experiment in paragraph form using complete sentences. Make sure that you include the numerical data (measurements) as well as any other important observations that you made.

Project Conclusions

Draw Conclusions

Analyze the results and determine how the results helps you answer your project question. Write your answer in a complete sentence using the question to begin your answer. You also need to tell whether your hypothesis was supported or if the results contradict the hypothesis. If it was not supported, explain why you think so. End this paragraph by saying how you would change or improve your experiment in the future.

Answer to your project question: _____

_____

_____

_____

Did the results support or contradict the hypothesis? Explain. _____

_____

_____

_____

How would you improve or change the experiment? _____

_____

_____

_____

_____

_____

Project Presentation

Display board

Now that you have completed your experiment you will begin setting up your display board to communicate the results of your experiment to others. Remember, the board is graded on the information you present, not how colorful or pretty it looks. Your display board must have ALL of the following components located in the same places.

Other board guidelines:

- Font should be easy to read and at least a size of 16pt or greater.
- Photos should not include faces of students.
- Information on the board can be typed or written neatly by hand.

Hypothesis

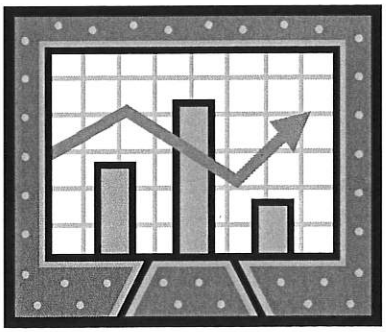
Key Words and Research

Procedure and Materials

Question/Title

Photos or Drawings

Graphs



Results

Conclusion

Project Abstract

Abstract

The abstract is a short version of your science fair final report. It should be no more than 250 words. Most of the information you will put in your abstract is already written, you will just need to copy it over. You must have the following five components in your abstract:

Introduction
Project Question
Procedures
Results
Conclusions

The only new thing you will need to write is the **Introduction**. This is where you describe the purpose for doing this experiment or project. Tell why people should care about the work you did. How does your experiment give us new science information? Can this information be used to improve our lives? If so, how? This is where you want to interest the reader in your project and motivate them to read the rest of it.

Project Component Score Sheets

Name(s): _____

You will receive a grade for completing the required components of a science fair project. Use this score sheet as a checklist as you complete your science fair project.

Component	Points Possible	Points Received
Science Fair Planning Packet	10 pts	
Display Board with: Question/Title Hypothesis Science Terms/Research Procedure and Materials Photos/Drawings Chart or Diagram Results Conclusion	10 pts	
Experiment Log	10 pts	
Abstract	10 pts	
TOTAL →	40 pts	

Project Content Score Sheets

Name(s): _____

You will receive a grade for the quality of the content of your science fair project. Use the score sheet as a guide as you complete your project.

Content	Points Possible	Points Received
Question * Question is relevant and testable through experimentation.	10 pts	
Research * Science terms and research are relevant to the question being tested.	10 pts	
Hypothesis * Hypothesis is based on observations.	10 pts	
Procedure * Procedure is clearly outlined and presents a controlled experiment.	10 pts	
Results * Results are communicated clearly through graph/ chart and well written explanation.	10 pts	
Conclusion * Conclusion includes appropriate evaluation of data and proves or disproves the hypothesis.	10 pts	
TOTAL →	60 pts	

Science Fair Reflection

Name: _____

1. What went well with your science fair project?

2. What didn't go so well with your science fair project?

3. How well did you/your group stay on task to meet deadlines?

4. What would you do differently if you were to do your science fair project over again?

5. If you worked with a group, how well did you work together?

Science Fair Self and Peer Score

Name: _____

Reflect on how you and your group members worked together as a team. Complete the first section for yourself and then the rest for each of your group members by circling the appropriate number on the scale. 1 is the lowest score and 5 is the highest score. Provide comments to support your scores.

Name: Me	
Ability to work as a group, share responsibility, and solve problems appropriately.	**1 2 3 4 5**
Ability to stay focused and on task during science fair time.	**1 2 3 4 5**
Comments:	

Name:	
Ability to work as a group, share responsibility, and solve problems appropriately.	**1 2 3 4 5**
Ability to stay focused and on task during science fair time.	**1 2 3 4 5**
Comments:	

Name:	
Ability to work as a group, share responsibility, and solve problems appropriately.	**1 2 3 4 5**
Ability to stay focused and on task during science fair time.	**1 2 3 4 5**
Comments:	